Biology - FSC Part 1 Biology English Medium Chapter 2 Preparation

Q1. Define heat capacity and gives its advantage,

Ans 1: The specific heat capacity of water is the number of calories required to raise the temperature of 1 gm of water from 15-16 Degree and it is 1 Degree.This is because much of the heat energy is used to break hydrogen bonds.Water work as temperature stabilizer for organisms in the environment and hence protects living materials against sudden thermal changes.

Q2. What are conjugated molecules?Give one example.

Ans 1: Two different molecule of two different categories usually combine together to form conjugate molecule.
For example carbohydrates may combine with proteins to form glycoproteins.

Q3. Compare alpha helix with beta pleated sheet in proteins.

Ans 1: The polypetide chain in a protein do not lie flat,they usually coil into a helix or in to beta sheet like form.
One of the basic common structure is the alpha helix,It involves a spiral formation of the basic polypetide chain.The alpha helix is very uniform geometric structure with 3.6 amino acids in each turn of the helix.The helical structure turns of spiral.Beta pleated sheet is formed by folding back of polypetide.

Q4. What are Waxes?

Ans 1: Chemically waxes are mixture of long chains of alkanes and alcohols,ketones and esters of long chain fatty acids.

Q5. Write two protective function of water.

Ans 1: Water is effective lubricant which provides protection against damage from friction e.g tears protect eye surface from the rubbing of eyelids.
Water also from fluid cushion around organs and protect them from trauma.

Q6. What is glycosidic bond?

Ans 1: A covalent bond between monosaccharide molecules is called glycosidic bond.During formation of glycoside bond hydroxyl group of one glucose unit and hydrogen of second glucose molecules react to from water and resulting bond is called glycoside bond.

Q7. Write a note on glycogen.

Ans 1: It is also called animals starch.It is the chief form of carbohydrates store in animal body,It is found abundantly in liver muscle,though found in all animals cells.It is in soluble in water.It gives red color with iodine,It also yields glucose on hydrolysis.

Q8. What are nucleohistones?

Ans 1: The nucleochistones are present in chromosomes.These conjugated proteins are not only of structural,but also are of functional significance. They play an important role in regulation of gene expression.

Q9. How a peptide bond is formed.

Ans 1: The linkage between hydrooxyl group of carboxylic group of one amino acid and the hydrogen of amino group of another amino acid release water and C-N link to form peptide bond.

Q10. Name four functions of proteins.

Ans 1: 1.Enzymes
2.Building Function
3.Transport
4.Hormones